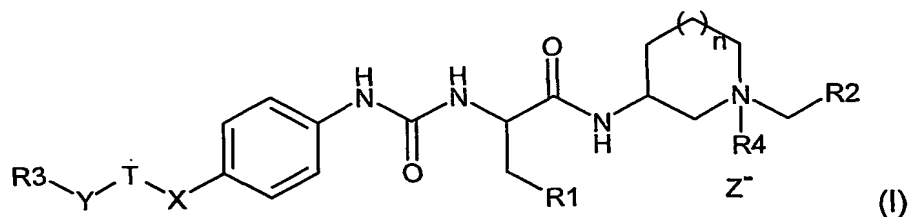


What is claimed is:

1. A compound of formula I as indicated below:



5 wherein

n is 0 or 1;

When X is nitrogen or oxygen, Y is nothing;

When Y is nitrogen or oxygen, X is nothing;

T is a sulfonyl group (SO<sub>2</sub>) or carbonyl group (CO) ;

10 When T=CO, X is oxygen or nitrogen;

Z<sup>-</sup> is selected from the group consisting of halo, CF<sub>3</sub>COO<sup>-</sup>, mesylate, tosylate, or any other pharmaceutically acceptable counter ion;

R<sub>1</sub> is selected from the group consisting of C<sub>1</sub>-C<sub>8</sub> branched or unbranched alkyl, C<sub>3</sub>-C<sub>8</sub> cycloalkyl, C<sub>3</sub>-C<sub>8</sub> cycloalkyl lower alkyl, C<sub>3</sub>-C<sub>8</sub> alkenyl, unsubstituted or substituted phenyl, or unsubstituted or substituted phenyl C<sub>1</sub>-C<sub>3</sub> lower alkyl; wherein, when substituted, a group is substituted by one or more radicals selected from the group consisting of C<sub>1</sub>-C<sub>8</sub> alkoxy, halo, hydroxy, amino, cyano, trifluoromethyl, C<sub>1</sub>-C<sub>8</sub> branched or unbranched alkyl, C<sub>3</sub>-C<sub>8</sub> cycloalkyl, C<sub>3</sub>-C<sub>8</sub> cycloalkyl lower alkyl, phenyl and phenyl C<sub>1</sub>-C<sub>3</sub> lower alkyl.

R<sub>2</sub> is selected from the group consisting of C<sub>1</sub>-C<sub>8</sub> branched or unbranched alkyl, C<sub>3</sub>-C<sub>8</sub> cycloalkyl, C<sub>3</sub>-C<sub>8</sub> cycloalkyl lower alkyl, unsubstituted or substituted phenyl, or unsubstituted or substituted phenyl C<sub>1</sub>-C<sub>3</sub> lower alkyl; wherein, when substituted, a group is substituted by one or more radicals selected from the group consisting of C<sub>1</sub>-C<sub>8</sub> alkoxy, halo, hydroxy, amino, cyano, trifluoromethyl, C<sub>1</sub>-C<sub>8</sub> branched or unbranched alkyl, C<sub>3</sub>-C<sub>8</sub> cycloalkyl and C<sub>3</sub>-C<sub>8</sub> cycloalkyl lower alkyl and heterocycle rings;

R3 is selected from the group consisting of an unsubstituted or substituted following group: phenyl, phenyl C1-C6 lower alkyl, thiophenyl, thiophenyl C1-C6 lower alkyl, furanyl, furanyl C1-C6 lower alkyl, pyridinyl, pyridinyl C1-C6 lower alkyl, imidazolyl, imidazolyl C1-C6 lower alkyl, naphthyl, naphthyl C1-C6 lower alkyl, quinolinyl, quinolinyl C1-C6 lower alkyl, indolyl, indolyl C1-C6 lower alkyl, benzothiophenyl, benzothiophenyl C1-C6 lower alkyl, benzofuranyl, benzofuranyl C1-C6 lower alkyl, benzoimidazolyl, benzoimidazolyl C1-C6 lower alkyl, C<sub>1</sub>-C<sub>8</sub> branched or unbranched alkyl, C<sub>3</sub>-C<sub>8</sub> cycloalkyl, C<sub>3</sub>-C<sub>8</sub> cycloalkyl C<sub>1</sub>-C<sub>6</sub> lower alkyl, or C<sub>3</sub>-C<sub>8</sub> alkenyl; wherein, when substituted, a group is substituted by one or more radicals selected from the group consisting of C<sub>1</sub>-C<sub>8</sub> alkoxy, phenoxy, phenyl C<sub>1</sub>-C<sub>3</sub> alkoxy, halo, hydroxy, amino, cyano, trifluoromethyl, methylenedioxy, ethylenedioxy, propylenedioxy, butylenedioxy, C<sub>1</sub>-C<sub>8</sub> branched or unbranched alkyl, C<sub>3</sub>-C<sub>8</sub> cycloalkyl, C<sub>3</sub>-C<sub>8</sub> cycloalkyl lower alkyl, phenyl, phenyl C1-C3 lower alkyl, thiophenyl, thiophenyl C1-C3 lower alkyl, furanyl, furanyl C1-C3 lower alkyl, pyridinyl, pyridinyl C1-C3 lower alkyl, naphthyl, naphthyl C1-C3 lower alkyl, quinolinyl, quinolinyl C1-C3 lower alkyl, indolyl, indolyl C1-C3 lower alkyl, benzothiophenyl, benzothiophenyl C1-C3 lower alkyl, benzofuranyl, benzofuranyl C1-C3 lower alkyl, COOH, COR<sub>6</sub>, COOR<sub>6</sub>, CONHR<sub>6</sub>, CON(R<sub>6</sub>)<sub>2</sub>, COG, NHR<sub>6</sub>, N(R<sub>6</sub>)<sub>2</sub>, G, OCOR<sub>6</sub>, OCONHR<sub>6</sub>, NHCOR<sub>6</sub>, N(R<sub>6</sub>)COR<sub>6</sub>, NHCOOR<sub>6</sub> and NHCONHR<sub>6</sub>;

R4 is selected from the group consisting of C<sub>1</sub>-C<sub>8</sub> branched or unbranched alkyl, C<sub>3</sub>-C<sub>8</sub> cycloalkyl, C<sub>3</sub>-C<sub>8</sub> cycloalkyl lower alkyl.

25

2. A. compound according to claim 1 selected from the group consisting of:  
n is 0 or 1;

When X is nitrogen or oxygen, Y is nothing;

30 When Y is nitrogen or oxygen, X is nothing;

T is a sulfonyl group (SO<sub>2</sub>) or carbonyl group (CO) ;

When T=CO, X is oxygen or nitrogen;

Z<sup>-</sup> is selected from the group consisting of halo, CF<sub>3</sub>COO<sup>-</sup>, mesylate, tosylate, or any other pharmaceutically acceptable counter ion;

R<sub>1</sub> is selected from the group consisting of C<sub>1</sub>-C<sub>8</sub> branched or  
5 unbranched alkyl, C<sub>3</sub>-C<sub>8</sub> cycloalkyl, C<sub>3</sub>-C<sub>8</sub> cycloalkyl lower alkyl, C<sub>3</sub>-C<sub>8</sub>  
alkenyl, unsubstituted or substituted phenyl, or unsubstituted or substituted  
phenyl C<sub>1</sub>-C<sub>3</sub> lower alkyl; wherein, when substituted, a group is substituted by  
one or more radicals selected from the group consisting of C<sub>1</sub>-C<sub>8</sub> alkoxy, halo,  
hydroxy, amino, cyano, trifluoromethyl, C<sub>1</sub>-C<sub>8</sub> branched or unbranched alkyl,  
10 C<sub>3</sub>-C<sub>8</sub> cycloalkyl, C<sub>3</sub>-C<sub>8</sub> cycloalkyl lower alkyl, phenyl and phenyl C<sub>1</sub>-C<sub>3</sub> lower  
alkyl.

R<sub>2</sub> is selected from the group consisting of C<sub>1</sub>-C<sub>8</sub> branched or  
unbranched alkyl, C<sub>3</sub>-C<sub>8</sub> cycloalkyl, C<sub>3</sub>-C<sub>8</sub> cycloalkyl lower alkyl, unsubstituted  
or substituted phenyl, or unsubstituted or substituted phenyl C<sub>1</sub>-C<sub>3</sub> lower alkyl;  
15 wherein, when substituted, a group is substituted by one or more radicals  
selected from the group consisting of C<sub>1</sub>-C<sub>8</sub> alkoxy, halo, hydroxy, amino,  
cyano, trifluoromethyl, C<sub>1</sub>-C<sub>8</sub> branched or unbranched alkyl, C<sub>3</sub>-C<sub>8</sub> cycloalkyl  
and C<sub>3</sub>-C<sub>8</sub> cycloalkyl lower alkyl and heterocycle rings;

R<sub>3</sub> is selected from the group consisting of an unsubstituted or  
20 substituted following group: phenyl, phenyl C<sub>1</sub>-C<sub>6</sub> lower alkyl, thiophenyl,  
thiophenyl C<sub>1</sub>-C<sub>6</sub> lower alkyl, furanyl, furanyl C<sub>1</sub>-C<sub>6</sub> lower alkyl, pyridinyl,  
pyridinyl C<sub>1</sub>-C<sub>6</sub> lower alkyl, imidazolyl, imidazolyl C<sub>1</sub>-C<sub>6</sub> lower alkyl, naphthyl,  
naphthyl C<sub>1</sub>-C<sub>6</sub> lower alkyl, quinoliny, quinoliny C<sub>1</sub>-C<sub>6</sub> lower alkyl, indolyl,  
indolyl C<sub>1</sub>-C<sub>6</sub> lower alkyl, benzothiophenyl, benzothiophenyl C<sub>1</sub>-C<sub>6</sub> lower alkyl,  
25 benzofuranyl, benzofuranyl C<sub>1</sub>-C<sub>6</sub> lower alkyl, benzoimidazolyl,  
benzoimidazolyl C<sub>1</sub>-C<sub>6</sub> lower alkyl, C<sub>1</sub>-C<sub>8</sub> branched or unbranched alkyl, C<sub>3</sub>-  
C<sub>8</sub> cycloalkyl, C<sub>3</sub>-C<sub>8</sub> cycloalkyl C<sub>1</sub>-C<sub>6</sub> lower alkyl, or C<sub>3</sub>-C<sub>8</sub> alkenyl; wherein,  
when substituted, a group is substituted by one or more radicals selected from  
the group consisting of C<sub>1</sub>-C<sub>8</sub> alkoxy, phenoxy, phenyl C<sub>1</sub>-C<sub>3</sub> alkoxy, halo,  
30 hydroxy, amino, cyano, trifluoromethyl, methylenedioxy, ethylenedioxy,

- propylenedioxy, butylenedioxy, C<sub>1</sub>-C<sub>8</sub> branched or unbranched alkyl, C<sub>3</sub>-C<sub>8</sub> cycloalkyl, C<sub>3</sub>-C<sub>8</sub> cycloalkyl lower alkyl, phenyl, phenyl C<sub>1</sub>-C<sub>3</sub> lower alkyl, thiophenyl, thiophenyl C<sub>1</sub>-C<sub>3</sub> lower alkyl, furanyl, furanyl C<sub>1</sub>-C<sub>3</sub> lower alkyl, pyridinyl, pyridinyl C<sub>1</sub>-C<sub>3</sub> lower alkyl, naphthyl, naphthyl C<sub>1</sub>-C<sub>3</sub> lower alkyl, quinolinyl, quinolinyl C<sub>1</sub>-C<sub>3</sub> lower alkyl, indolyl, indolyl C<sub>1</sub>-C<sub>3</sub> lower alkyl, benzothiophenyl, benzothiophenyl C<sub>1</sub>-C<sub>3</sub> lower alkyl, benzofuranyl, benzofuranyl C<sub>1</sub>-C<sub>3</sub> lower alkyl, COOH, COR<sub>6</sub>, COOR<sub>6</sub>, CONHR<sub>6</sub>, CON(R<sub>6</sub>)<sub>2</sub>, COG, NHR<sub>6</sub>, N(R<sub>6</sub>)<sub>2</sub>, G, OCOR<sub>6</sub>, OCONHR<sub>6</sub>, NHCOR<sub>6</sub>, N(R<sub>6</sub>)COR<sub>6</sub>, NHCOOR<sub>6</sub> and NHCONHR<sub>6</sub>;
- 10 R<sub>4</sub> is selected from the group consisting of C<sub>1</sub>-C<sub>8</sub> branched or unbranched alkyl, C<sub>3</sub>-C<sub>8</sub> cycloalkyl, C<sub>3</sub>-C<sub>8</sub> cycloalkyl lower alkyl.

or a pharmaceutically acceptable salt thereof.

- 15 3. A. compound according to claim 1 selected from the group consisting of:
- n is 0 or 1;
- When X is nitrogen or oxygen, Y is nothing;
- When Y is nitrogen or oxygen, X is nothing;
- 20 T is a sulfonyl group (SO<sub>2</sub>) or carbonyl group (CO) ;
- When T=CO, X is oxygen or nitrogen;
- Z<sup>-</sup> is selected from the group consisting of halo, CF<sub>3</sub>COO<sup>-</sup>, mesylate, tosylate, or any other pharmaceutically acceptable counter ion;
- R<sub>1</sub> is selected from the group consisting of C<sub>1</sub>-C<sub>8</sub> branched or
- 25 unbranched alkyl, C<sub>3</sub>-C<sub>8</sub> cycloalkyl, C<sub>3</sub>-C<sub>8</sub> cycloalkyl lower alkyl, C<sub>3</sub>-C<sub>8</sub> alkenyl, unsubstituted or substituted phenyl, or unsubstituted or substituted phenyl C<sub>1</sub>-C<sub>3</sub> lower alkyl; wherein, when substituted, a group is substituted by one or more radicals selected from the group consisting of C<sub>1</sub>-C<sub>8</sub> alkoxy, halo, hydroxy, amino, cyano, trifluoromethyl, C<sub>1</sub>-C<sub>8</sub> branched or unbranched alkyl,
- 30 C<sub>3</sub>-C<sub>8</sub> cycloalkyl, C<sub>3</sub>-C<sub>8</sub> cycloalkyl lower alkyl, phenyl and phenyl C<sub>1</sub>-C<sub>3</sub> lower alkyl.

R2 is selected from the group consisting of C<sub>1</sub>-C<sub>8</sub> branched or unbranched alkyl, C<sub>3</sub>-C<sub>8</sub> cycloalkyl, C<sub>3</sub>-C<sub>8</sub> cycloalkyl lower alkyl, unsubstituted or substituted phenyl, or unsubstituted or substituted phenyl C<sub>1</sub>-C<sub>3</sub> lower alkyl; wherein, when substituted, a group is substituted by one or more radicals  
 5 selected from the group consisting of C<sub>1</sub>-C<sub>8</sub> alkoxy, halo, hydroxy, amino, cyano, trifluoromethyl, C<sub>1</sub>-C<sub>8</sub> branched or unbranched alkyl, C<sub>3</sub>-C<sub>8</sub> cycloalkyl and C<sub>3</sub>-C<sub>8</sub> cycloalkyl lower alkyl and heterocycle rings;

R3 is selected from the group consisting of an unsubstituted or substituted following group: phenyl, phenyl C<sub>1</sub>-C<sub>6</sub> lower alkyl, thiophenyl, thiophenyl C<sub>1</sub>-C<sub>6</sub> lower alkyl, furanyl, furanyl C<sub>1</sub>-C<sub>6</sub> lower alkyl, pyridinyl, pyridinyl C<sub>1</sub>-C<sub>6</sub> lower alkyl, imidazolyl, imidazolyl C<sub>1</sub>-C<sub>6</sub> lower alkyl, naphthyl, naphthyl C<sub>1</sub>-C<sub>6</sub> lower alkyl, quinolinyl, quinolinyl C<sub>1</sub>-C<sub>6</sub> lower alkyl, indolyl, indolyl C<sub>1</sub>-C<sub>6</sub> lower alkyl, benzothiophenyl, benzothiophenyl C<sub>1</sub>-C<sub>6</sub> lower alkyl, benzofuranyl, benzofuranyl C<sub>1</sub>-C<sub>6</sub> lower alkyl, benzoimidazolyl, benzoimidazolyl C<sub>1</sub>-C<sub>6</sub> lower alkyl, C<sub>1</sub>-C<sub>8</sub> branched or unbranched alkyl, C<sub>3</sub>-C<sub>8</sub> cycloalkyl, C<sub>3</sub>-C<sub>8</sub> cycloalkyl C<sub>1</sub>-C<sub>6</sub> lower alkyl, or C<sub>3</sub>-C<sub>8</sub> alkenyl; wherein, when substituted, a group is substituted by one or more radicals selected from the group consisting of C<sub>1</sub>-C<sub>8</sub> alkoxy, phenoxy, phenyl C<sub>1</sub>-C<sub>3</sub> alkoxy, halo, hydroxy, amino, cyano, trifluoromethyl, methylenedioxy, ethylenedioxy, propylenedioxy, butylenedioxy, C<sub>1</sub>-C<sub>8</sub> branched or unbranched alkyl, C<sub>3</sub>-C<sub>8</sub> cycloalkyl, C<sub>3</sub>-C<sub>8</sub> cycloalkyl lower alkyl, phenyl, phenyl C<sub>1</sub>-C<sub>3</sub> lower alkyl, thiophenyl, thiophenyl C<sub>1</sub>-C<sub>3</sub> lower alkyl, furanyl, furanyl C<sub>1</sub>-C<sub>3</sub> lower alkyl, pyridinyl, pyridinyl C<sub>1</sub>-C<sub>3</sub> lower alkyl, naphthyl, naphthyl C<sub>1</sub>-C<sub>3</sub> lower alkyl, quinolinyl, quinolinyl C<sub>1</sub>-C<sub>3</sub> lower alkyl, indolyl, indolyl C<sub>1</sub>-C<sub>3</sub> lower alkyl, benzothiophenyl, benzothiophenyl C<sub>1</sub>-C<sub>3</sub> lower alkyl, benzofuranyl, benzofuranyl C<sub>1</sub>-C<sub>3</sub> lower alkyl, COOH, COR<sub>6</sub>, COOR<sub>6</sub>, CONHR<sub>6</sub>, CON(R<sub>6</sub>)<sub>2</sub>, COG, NHR<sub>6</sub>, N(R<sub>6</sub>)<sub>2</sub>, G, OCOR<sub>6</sub>, OCONHR<sub>6</sub>, NHCOR<sub>6</sub>, N(R<sub>6</sub>)COR<sub>6</sub>, NHCOOR<sub>6</sub> and NHCONHR<sub>6</sub>;  
 15  
 20  
 25

R4 is selected from the group consisting of C<sub>1</sub>-C<sub>8</sub> branched or unbranched alkyl, C<sub>3</sub>-C<sub>8</sub> cycloalkyl, C<sub>3</sub>-C<sub>8</sub> cycloalkyl lower alkyl.  
 30

4.

or a pharmaceutically acceptable salt thereof.

4. A. compound according to claim 1 selected from the group consisting of:

- 5 *N*-((3*S*)-1-[[3,4-bis(methyloxy)phenyl]methyl]-1-methyl-3-piperidiniumyl)-*N*-{[(4-  
 {(2,2,2-trifluoroethyl)sulfonyl]oxy}phenyl)amino]carbonyl}-L-tyrosinamide  
 trifluoroacetate;  
*N*-((3*S*)-1-[[3,4-bis(methyloxy)phenyl]methyl]-1-methyl-3-piperidiniumyl)-*N*-{[(4-  
 {(5-methyl-2-thienyl)sulfonyl]oxy}phenyl)amino]carbonyl}-L-tyrosinamide  
 10 trifluoroacetate;  
*N*-((3*S*)-1-[[3,4-bis(methyloxy)phenyl]methyl]-1-methyl-3-piperidiniumyl)-*N*-{[(4-  
 {(4-methyl-2-thienyl)sulfonyl]oxy}phenyl)amino]carbonyl}-L-tyrosinamide  
 trifluoroacetate;  
*N*-((3*S*)-1-[[3,4-bis(methyloxy)phenyl]methyl]-1-methyl-3-piperidiniumyl)-*N*-{[(4-  
 15 [(8-quinoliny)sulfonyl]oxy]phenyl)amino]carbonyl}-L-tyrosinamide  
 trifluoroacetate;  
*N*-((3*S*)-1-[[3,4-bis(methyloxy)phenyl]methyl]-1-methyl-3-piperidiniumyl)-*N*-{[(4-  
 {(3,4-bis(methyloxy)phenyl)sulfonyl]oxy}phenyl)amino]carbonyl}-L-  
 tyrosinamide trifluoroacetate;  
 20 *N*-((3*S*)-1-[[3,4-bis(methyloxy)phenyl]methyl]-1-methyl-3-piperidiniumyl)-*N*-{[(4-  
 {(2-bromophenyl)sulfonyl]oxy}phenyl)amino]carbonyl}-L-tyrosinamide  
 trifluoroacetate;  
*N*-((3*S*)-1-[[3,4-bis(methyloxy)phenyl]methyl]-1-methyl-3-piperidiniumyl)-*N*-{[(4-  
 {(4-fluorophenyl)sulfonyl]oxy}phenyl)amino]carbonyl}-L-tyrosinamide  
 25 trifluoroacetate;  
*N*-((3*S*)-1-[[3,4-bis(methyloxy)phenyl]methyl]-1-methyl-3-piperidiniumyl)-*N*-{[(4-  
 [(phenylsulfonyl]oxy)phenyl]amino]carbonyl}-L-tyrosinamide trifluoroacetate;  
*N*-((3*S*)-1-[[3,4-bis(methyloxy)phenyl]methyl]-1-methyl-3-piperidiniumyl)-*N*-{[(4-  
 {(5-bromo-2-thienyl)sulfonyl]oxy}phenyl)amino]carbonyl}-L-tyrosinamide  
 30 trifluoroacetate;  
*N*-((3*S*)-1-[[3,4-bis(methyloxy)phenyl]methyl]-1-methyl-3-piperidiniumyl)-*N*-{[(4-  
 [(3-thienyl)sulfonyl]oxy]phenyl)amino]carbonyl}-L-tyrosinamide trifluoroacetate;

- N*-[(3*S*)-1-(1,3-benzodioxol-5-ylmethyl)-1-methyl-3-piperidiniumyl]-*N*-{[(4-{[(2,5-dimethyl-3-thienyl)sulfonyl]oxy}phenyl)amino]carbonyl}-L-tyrosinamide trifluoroacetate;
- 5 *N*-[(3*S*)-1-(1,3-benzodioxol-5-ylmethyl)-1-methyl-3-piperidiniumyl]-*N*-{[(4-{[(2,2,2-trifluoroethyl)sulfonyl]oxy}phenyl)amino]carbonyl}-L-tyrosinamide trifluoroacetate;
- N*-[(3*S*)-1-(1,3-benzodioxol-5-ylmethyl)-1-methyl-3-piperidiniumyl]-*N*-{[(4-{[(5-methyl-2-thienyl)sulfonyl]oxy}phenyl)amino]carbonyl}-L-tyrosinamide trifluoroacetate;
- 10 *N*-[(3*S*)-1-(1,3-benzodioxol-5-ylmethyl)-1-methyl-3-piperidiniumyl]-*N*-{[(4-{[(4-methyl-2-thienyl)sulfonyl]oxy}phenyl)amino]carbonyl}-L-tyrosinamide trifluoroacetate;
- N*-[(3*S*)-1-(1,3-benzodioxol-5-ylmethyl)-1-methyl-3-piperidiniumyl]-*N*-{[(4-{[(5-chloro-2-thienyl)sulfonyl]oxy}phenyl)amino]carbonyl}-L-tyrosinamide
- 15 trifluoroacetate;
- N*-[(3*S*)-1-(1,3-benzodioxol-5-ylmethyl)-1-methyl-3-piperidiniumyl]-*N*-{[(4-{[(methylsulfonyl)oxy]phenyl)amino]carbonyl}-L-tyrosinamide trifluoroacetate;
- N*-[(3*S*)-1-(1,3-benzodioxol-5-ylmethyl)-1-methyl-3-piperidiniumyl]-*N*-{[(4-{[(propylsulfonyl)oxy]phenyl)amino]carbonyl}-L-tyrosinamide trifluoroacetate;
- 20 *N*-{[(4-{[(2-(acetylamino)-4-methyl-1,3-thiazol-5-yl)sulfonyl]oxy}phenyl)amino]carbonyl}-*N*-[(3*S*)-1-(1,3-benzodioxol-5-ylmethyl)-1-methyl-3-piperidiniumyl]-L-tyrosinamide trifluoroacetate;
- N*-[(3*S*)-1-(1,3-benzodioxol-5-ylmethyl)-1-methyl-3-piperidiniumyl]-*N*-{[(4-{[(4-(phenylsulfonyl)-2-thienyl)sulfonyl]oxy}phenyl)amino]carbonyl}-L-tyrosinamide
- 25 trifluoroacetate;
- N*-[(3*S*)-1-(1,3-benzodioxol-5-ylmethyl)-1-methyl-3-piperidiniumyl]-*N*-{[(4-{[(5-chloro-2,1,3-benzoxadiazol-4-yl)sulfonyl]oxy}phenyl)amino]carbonyl}-L-tyrosinamide trifluoroacetate;
- N*-[(3*S*)-1-(1,3-benzodioxol-5-ylmethyl)-1-methyl-3-piperidiniumyl]-*N*-{[(4-{[(2-naphthalenylsulfonyl)oxy]phenyl)amino]carbonyl}-L-tyrosinamide
- 30 trifluoroacetate;

- N*-[(3*S*)-1-(1,3-benzodioxol-5-ylmethyl)-1-methyl-3-piperidiniumyl]-*N*-{[(4-{[(2,2,2-trifluoroethyl)sulfonyl]oxy}phenyl)amino]carbonyl}-L-tyrosinamide trifluoroacetate;
- N*-{(3*S*)-1-[(4-fluorophenyl)methyl]-1-methyl-3-piperidiniumyl}-*N*-{[(4-{[(5-methyl-2-thienyl)sulfonyl]oxy}phenyl)amino]carbonyl}-L-tyrosinamide trifluoroacetate;
- N*-{(3*S*)-1-[(4-fluorophenyl)methyl]-1-methyl-3-piperidiniumyl}-*N*-{[(4-{[(4-methyl-2-thienyl)sulfonyl]oxy}phenyl)amino]carbonyl}-L-tyrosinamide trifluoroacetate;
- N*-{[(4-{[(4-cyanophenyl)sulfonyl]oxy}phenyl)amino]carbonyl}-*N*-{(3*S*)-1-[(4-fluorophenyl)methyl]-1-methyl-3-piperidiniumyl}-L-tyrosinamide trifluoroacetate;
- N*-{(3*S*)-1-[(4-fluorophenyl)methyl]-1-methyl-3-piperidiniumyl}-*N*-{[(4-{[(4-(trifluoromethyl)phenyl)sulfonyl]oxy}phenyl)amino]carbonyl}-L-tyrosinamide trifluoroacetate;
- N*-{(3*S*)-1-[(4-fluorophenyl)methyl]-1-methyl-3-piperidiniumyl}-*N*-{[(4-{[(5-(3-isoxazolyl)-2-thienyl)sulfonyl]oxy}phenyl)amino]carbonyl}-L-tyrosinamide trifluoroacetate;
- N*-{(3*S*)-1-[(4-fluorophenyl)methyl]-1-methyl-3-piperidiniumyl}-*N*-{[(4-{[(3-fluorophenyl)sulfonyl]oxy}phenyl)amino]carbonyl}-L-tyrosinamide trifluoroacetate;
- N*-{(3*S*)-1-[(4-fluorophenyl)methyl]-1-methyl-3-piperidiniumyl}-*N*-{[(4-{[(1,3,5-trimethyl-1*H*-pyrazol-4-yl)sulfonyl]oxy}phenyl)amino]carbonyl}-L-tyrosinamide trifluoroacetate;
- N*-{(3*S*)-1-[(4-fluorophenyl)methyl]-1-methyl-3-piperidiniumyl}-*N*-{[(4-{[(5-methyl-4-isoxazolyl)sulfonyl]oxy}phenyl)amino]carbonyl}-L-tyrosinamide trifluoroacetate;
- N*-{[(4-{[(3,5-dimethyl-4-isoxazolyl)sulfonyl]oxy}phenyl)amino]carbonyl}-*N*-{(3*S*)-1-[(4-fluorophenyl)methyl]-1-methyl-3-piperidiniumyl}-L-tyrosinamide trifluoroacetate;
- N*-{[(4-{[(2,4-dichlorophenyl)sulfonyl]oxy}phenyl)amino]carbonyl}-*N*-{(3*S*)-1-[(4-fluorophenyl)methyl]-1-methyl-3-piperidiniumyl}-L-tyrosinamide trifluoroacetate;
- N*-{(3*S*)-1-[(4-fluorophenyl)methyl]-1-methyl-3-piperidiniumyl}-*N*-{[(4-{[(4-{[(trifluoromethyl)oxy]phenyl)sulfonyl]oxy}phenyl)amino]carbonyl}-L-tyrosinamide trifluoroacetate;



- N*-{(3*S*)-1-[(4-fluorophenyl)methyl]-1-methyl-3-piperidiniumyl}-*N*-{[(4-{[(1-methyl-1*H*-imidazol-4-yl)sulfonyl]oxy}phenyl)amino]carbonyl}-L-tyrosinamide trifluoroacetate;
- 5 *N*-{[(4-{[(cyclohexylcarbonyl)oxy]phenyl}amino)carbonyl]-*N*-{(3*S*)-1-[(4-fluorophenyl)methyl]-1-methyl-3-piperidiniumyl}-L-tyrosinamide trifluoroacetate;
- N*-{(3*S*)-1-(1,3-benzodioxol-5-ylmethyl)-1-methyl-3-piperidiniumyl}-*N*-{[(4-{[(cyclohexylcarbonyl)oxy]phenyl}amino)carbonyl]-L-tyrosinamide trifluoroacetate;
- 10 *N*-{(3*S*)-1-[(4-chlorophenyl)methyl]-1-methyl-3-piperidiniumyl}-*N*-{[(4-{[(cyclohexylcarbonyl)oxy]phenyl}amino)carbonyl]-L-tyrosinamide trifluoroacetate;
- N*-{(3*S*)-1-[(3-chlorophenyl)methyl]-1-methyl-3-piperidiniumyl}-*N*-{[(4-{[(cyclohexylcarbonyl)oxy]phenyl}amino)carbonyl]-L-tyrosinamide trifluoroacetate;
- 15 *N*-{(3*S*)-1-[[3,4-bis(methyloxy)phenyl]methyl]-1-methyl-3-piperidiniumyl}-*N*-{[(4-{[(cyclohexylcarbonyl)oxy]phenyl}amino)carbonyl]-L-tyrosinamide trifluoroacetate;
- N*-{(3*S*)-1-[(3-hydroxyphenyl)methyl]-1-methyl-3-piperidiniumyl}-*N*-{[(4-{[(2-methylpropanoyl)oxy]phenyl}amino)carbonyl]-L-tyrosinamide trifluoroacetate;
- 20 *N*-{(3*S*)-1-[(3-chlorophenyl)methyl]-1-methyl-3-piperidiniumyl}-*N*-{[(4-{[(2-methylpropanoyl)oxy]phenyl}amino)carbonyl]-L-tyrosinamide trifluoroacetate;
- N*-{(3*S*)-1-[(4-chlorophenyl)methyl]-1-methyl-3-piperidiniumyl}-*N*-{[(4-{[(2-methylpropanoyl)oxy]phenyl}amino)carbonyl]-L-tyrosinamide trifluoroacetate;
- N*-{(3*S*)-1-(1,3-benzodioxol-5-ylmethyl)-1-methyl-3-piperidiniumyl}-*N*-{[(4-{[(1-methylethyl)amino]sulfonyl}phenyl)amino]carbonyl}-L-tyrosinamide trifluoroacetate;
- 25 *N*-{(3*S*)-1-ethyl-1-[(3-hydroxyphenyl)methyl]-3-pyrrolidiniumyl}-*N*-{[(4-{[(1-methylethyl)amino]sulfonyl}phenyl)amino]carbonyl}-L-tyrosinamide trifluoroacetate;
- 30 or any other pharmaceutically acceptable salt.

5. A compound according to claim 1 selected from the group consisting of:  
*N*-((3*S*)-1-[[3,4-bis(methyloxy)phenyl]methyl]-1-methyl-3-piperidiniumyl)-*N*-{[(4-  
 {(2,5-dimethyl-3-thienyl)sulfonyl]oxy}phenyl)amino]carbonyl}-L-tyrosinamidè  
 trifluoroacetate
- 5 *N*-((3*S*)-1-[[3,4-bis(methyloxy)phenyl]methyl]-1-methyl-3-piperidiniumyl)-*N*-{[(4-  
 {(2,5-dimethyl-3-thienyl)sulfonyl]oxy}phenyl)amino]carbonyl}-L-tyrosinamide  
 trifluoroacetate;  
*N*-((3*S*)-1-[[3,4-bis(methyloxy)phenyl]methyl]-1-methyl-3-piperidiniumyl)-*N*-{[(4-  
 {(1-methylethyl)sulfonyl]oxy}phenyl)amino]carbonyl}-L-tyrosinamide
- 10 trifluoroacetate;  
*N*-[(3*S*)-1-(1,3-benzodioxol-5-ylmethyl)-1-methyl-3-piperidiniumyl]-*N*-{[(4-  
 {(6-chloro-3-methyl-1-benzothien-2-yl)sulfonyl]oxy}phenyl)amino]carbonyl}-L-  
 tyrosinamide trifluoroacetate;  
*N*-{[(4-  
 {(2,5-dimethyl-3-thienyl)sulfonyl]oxy}phenyl)amino]carbonyl}-*N*-{(3*S*)-1-
- 15 [(4-fluorophenyl)methyl]-1-methyl-3-piperidiniumyl}-L-tyrosinamide  
 trifluoroacetate;  
*N*-{(3*S*)-1-[(4-fluorophenyl)methyl]-1-methyl-3-piperidiniumyl}-*N*-{[(4-  
 {(1-methylethyl)sulfonyl]oxy}phenyl)amino]carbonyl}-L-tyrosinamide  
 trifluoroacetate;
- 20 *N*-{(3*S*)-1-[(4-fluorophenyl)methyl]-1-methyl-3-piperidiniumyl}-*N*-{[(4-  
 {(1-methylethyl)sulfonyl]oxy}phenyl)amino]carbonyl}-L-tyrosinamide  
 trifluoroacetate;  
*N*-{(3*S*)-1-[(3-hydroxyphenyl)methyl]-1-methyl-3-piperidiniumyl}-*N*-{[(4-  
 {(1-methylethyl)amino]sulfonyl}phenyl)amino]carbonyl}-L-tyrosinamide
- 25 trifluoroacetate  
 or any other pharmaceutically acceptable salt, or non-salt form thereof.

6. A Pharmaceutical composition for the treatment of muscarinic  
 acetylcholine receptor mediated diseases comprising a compound according to  
 30 claim 1 and a pharmaceutically acceptable carrier thereof.

7. A method of inhibiting the binding of acetylcholine to its receptors in a mammal in need thereof comprising administering a safe and effective amount of a compound according to claim 1.
- 5 8. A method of treating a muscarinic acetylcholine receptor mediated disease, wherein acetylcholine binds to said receptor, comprising administering a safe and effective amount of a compound according to claim 1.
9. A method according to claim 8 wherein the disease is selected from the  
10 group consisting of chronic obstructive lung disease, chronic bronchitis, asthma, chronic respiratory obstruction, pulmonary fibrosis, pulmonary emphysema and allergic rhinitis.
10. A method according to claim 9 wherein administration is via inhalation  
15 via the mouth or nose.
11. A method according to claim 10 wherein administration is via a medicament dispenser selected from a reservoir dry powder inhaler, a multi-dose dry powder inhaler or a metered dose inhaler.  
20
12. A method according to claim 11 wherein the compound is administered to a human and has a duration of action of 12 hours or more for a 1 mg dose.
13. A method according to claim 12 wherein the compound has a duration of  
25 action of 24 hours or more.
14. A method according to claim 13 wherein the compound has a duration of action of 36 hours or more.